REMARKS

After entry of this amendment, claims 1-39 remain pending. In the present Office Action, claims 10-13 were rejected under 35 U.S.C. § 101. Claims 1-28 were rejected under 35 U.S.C. § 102(e) as being anticipated by Araujo et al., U.S. Patent No. 7,111,060 ("Araujo"). Applicants respectfully traverse these rejections and request reconsideration.

Claims 1-26 and 29-39

Applicants respectfully submit that claims 1-26 and 29-39 recite combinations of features not taught or suggested in the cited art. For example, claim 1 recites a combination of features including:

> at least one computer system, wherein the computer system is configured to execute a virtual machine corresponding to a user, wherein the virtual machine comprises an operating system and at least one application executable on the operating system, and the operating system and application executing on the computer system during use;
> a storage subsystem configured to store data representing the virtual machine, the data including the operating system and the application; and
> at least one file server coupled to a network to which the computer system is configured to be coupled, wherein the file server is further coupled to the storage subsystem, and wherein the file server is configured to provide the computer system with access to the data representing the virtual machine on the storage subsystem over the network.

With regard to original claim 1, the Office Action asserts that Araujo anticipates the claims. Specifically, the Office Action asserts that Araujo anticipates the computer system configured to execute the virtual machine at col. 4, lines 1-3 and col. 9, lines 3-45. Applicants respectfully submit that Araujo does not anticipate the above highlighted features.

Araujo does use the term "virtual machine" at col. 4, lines 1-3. However, when read in context, it is clear that the virtual machine in this section of Araujo is different than the claimed virtual machine highlighted above. For example, Araujo teaches:

"Through the Metaframe program, the network server situated on the LAN would function as an ASP by hosting multiple virtual sessions of a given application program executing **on the server**, in effect implementing multiple virtual machines, to various different remotely located client PCs. Each remote client, running the ICA client program, would access, over, e.g., a WAN connection, a desired thin-client application hosted at the LAN-based server and establish a separate application session. The ICA client would communicate mouse clicks and keystrokes entered by a user stationed at the client PC, over the WAN connection, to the Metaframe program executing in the server which, in turn, would provide screen shots back to the client PC for local display to a user stationed thereat. This information would be carried between the client and server using an 'ICA' protocol." (Araujo, col. 3, line 65-col. 4, line 13) Accordingly, in context, it is clear that Araujo is not describing a virtual machine executed on a computer, the virtual machine including an operating system and application executed on the computer. Additionally, Araujo is teaching remote execution of a client program on a server, and providing user input/output at the remote client.

At col. 9, lines 3-45, Araujo includes a basic description of his apparatus. However, in this section, it is also clear that the application execution is provided on the server: "our inventive apparatus effectively implements a front-end to the office server, regardless of whether that office server is implemented by a single machine (computer) or multiple machines, and regardless of whether those machines are co-located or not, as long as they are interconnected to the apparatus through an appropriate network. If the office server is implemented by multiple inter-networked machines--as is often the case in medium or large sized organizations, each of these machines can handle one or more specific office processing tasks, e.g., client application program hosting, e-mail serving and/or file serving. Alternatively, for small organizations with limited processing equipment, either our inventive apparatus itself, through its internal processing capability, can implement all these tasks or can serve as a front-end to a single separate machine (computer) which does so." (Araujo, col. 9, lines 16-32) Thus, Araujo teaches office servers which implement client application execution, email serving, file serving, etc. The client computer does not execute any of the application programs itself.

Accordingly, Araujo does not teach or suggest a computer system that is configured to execute a virtual machine that includes an operating system and an application, where the data representing the virtual machine (including the operating system and the application) is stored on the storage subsystem and the file server provides access to the virtual machine data for the computer system on the storage subsystem, as recited in claim 1.

The Office Action also asserts that Araujo teaches the file server providing access to the virtual machine data at col. 11, line 62 to col. 12, line 19. Applicants respectfully disagree. Araujo teaches: "In doing so, SEP 200 (see FIG. 1) establishes a LAN connection for the remote user that, as far as that user is concerned, places remote client 10 directly on the LAN. By virtue of such a connection, the remote user can, e.g.: (a) send and receive e-mail through server 76 and manipulate his(her) e-mail stored thereon, (b) access, through file server 78, all his(her) files, as well as other shared files, stored on and accessible through LAN 65, **(c) remotely execute, through application server 72, any of his(her) thin-client applications hosted thereon,** as well as through server 74 **remotely execute any of his(her) thin-client web-based applications hosted there**, with real-time results of each of these operations being displayed in HTML form on browser 15. Application server 72 receives user mouse clicks and keystroke data and provides user screen shot displays through use of MICROSOFT.RTM. RDP (remote desktop protocol). Web-enabled application server 74 communicates client application information using HTTP. E-mail server 76 utilizes a conventional IMAP4 protocol; while file server 78 communicates user information using MICROSOFT.RTM. .NET technology Simplified Message Block (SMB) data (to implement MICROSOFT.RTM. .NET technology-BIOS functionality). Note, that while SMB and IMAP4 were shown here as examples, other protocols such as Novell Netware and the POP3 (Post Office Protocol 3) are usable as well." Thus, Araujo teaches that all application execution occurs remotely on the servers.

Araujo also teaches (col. 9, line 65-col. 10, line 7): "Our invention advantageously utilizes web-based access to office applications, with those applications being **remotely hosted** by virtual office server 40 and encrypted communication provided through conventional secure sockets layer (SSL) capability supported within the browser. As such, client 10 contains conventional user browser 15. Advantageously, **since all the office applications are hosted remotely**, there is no need to install, configure or maintain any user application programs, other than a web browser, on remote client 10; thereby, dramatically reducing cost of ownership of the client PC." These teachings do not teach or suggest the combination of features recited in claim 1.

For at least the above stated reasons, Applicants submit that claim 1 is patentable over the cited art. Claims 2-9 depend from claim 1 and recite additional combinations of features not taught or suggested in the cited art.

Claim 10 recites a combination of features including: "A computer accessible storage medium storing a plurality of instructions which, when executed on a computer system, responsive to a login of a user on the computer system, cause the computer system to execute a virtual machine corresponding to the user, the virtual machine represented by data stored in a filesystem accessible to the computer system over a network to which the computer system is configured to be coupled at least intermittently, wherein the virtual machine comprises an operating system and at least one application executable on the operating system, and the operating system and application executing on the computer system during use, and wherein the data stored in the filesystem that represents the virtual machine includes the operating system and the application." Essentially the same features of Araujo highlighted above with regard to claim 1 are alleged to anticipate the above highlighted features of claim 10. Applicants respectfully submit that Araujo does not anticipate the combination of features recited in claim 10, either. Claims 11-13 and 29-39 depend from claim 10 and recite additional combinations of features not taught or suggested in the cited art. Claim 14 recites a combination of features including features similar to those highlighted above with regard to claim 10. Thus, claim 14 is not anticipated by Araujo either. Claims 15-17 recite combinations of

features not taught or suggested in the cited art.

Claim 18 recites a combination of features including: "responsive to a login of a user on a computer system, executing a virtual machine corresponding to the user on the computer system, wherein the virtual machine comprises an operating system and at least one application executable on the operating system; and communicating, at least intermittently, with a file server that manages a file system on a storage system, wherein the storage system stores data representing the virtual machine, the data including the operating system and the at least one application, the communicating occurring over a network between the file server and the computer system to provide access to the data representing the virtual machine." Essentially the same features of Araujo highlighted above with regard to claim 1 are alleged to anticipate the above highlighted features of claim 18. Applicants respectfully submit that Araujo does not anticipate the combination of features recited in claim 18, either. Claims 19-26 depend from claim 18 and recite additional combinations of features not taught or suggested in the cited art.

Claims 27-28

Applicants respectfully submit that claims 27-28 are not taught or suggested in the cited art. For example, claim 27 recites a combination of features including:

> executing the virtual machine on the second computer system responsive to the user reporting a problem with the virtual machine;
> diagnosing the problem; and
> if the problem is within the virtual machine, correcting the problem by modifying the data representing the virtual machine on the storage subsystem.

The Office Action asserts that Araujo anticipates the above highlighted features, citing col. 18, line 2-col. 19, line 16. Applicants respectfully disagree. The only reference in the cited section to any problems being reported is at the end of the section: "This module also alerts administrative web site 20 (see FIG. 1) if, as a result of its monitoring tasks, it detects any abnormal operation for any of the virtual office functionality. Since this module is not particularly relevant to the present invention, we

will not discuss it in any further detail." (Araujo, col. 19, lines 11-15) Araujo is referring to monitoring by the virtual office server software to detect abnormal operation in an SEP or underlying application, and reporting the operation to an administrative website. Such teachings fail to teach or suggest a user reporting a problem to an administrator, and also fails to teach or suggest any diagnosis or correction of the problem as recited in claim 27.

For at least the above stated reasons, Applicants submit that claim 27 is patentable over the cited art. Claim 28 depends from claim 27 and recites additional combinations of features not taught or suggested in the cited art.

Section 101 Rejection

The Office Action asserts that claims 10-13 are not statutory under 35 U.S.C. § 101 because the definition of computer accessible medium in the specification includes transmission media. Applicants respectfully disagree, but have nevertheless amended claims 10-13 to recite a computer accessible storage medium storing a plurality of instructions. Applicants respectfully submit that the amendment addresses the objection.

CONCLUSION

Applicants submit that the application is in condition for allowance, and an early notice to that effect is requested.

If any extensions of time (under 37 C.F.R. § 1.136) are necessary to prevent the above referenced application(s) from becoming abandoned, Applicant(s) hereby petition for such extensions. If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert, & Goetzel, P.C. Deposit Account No. 501505/5760-20000/LJM.

Respectfully submitted,

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